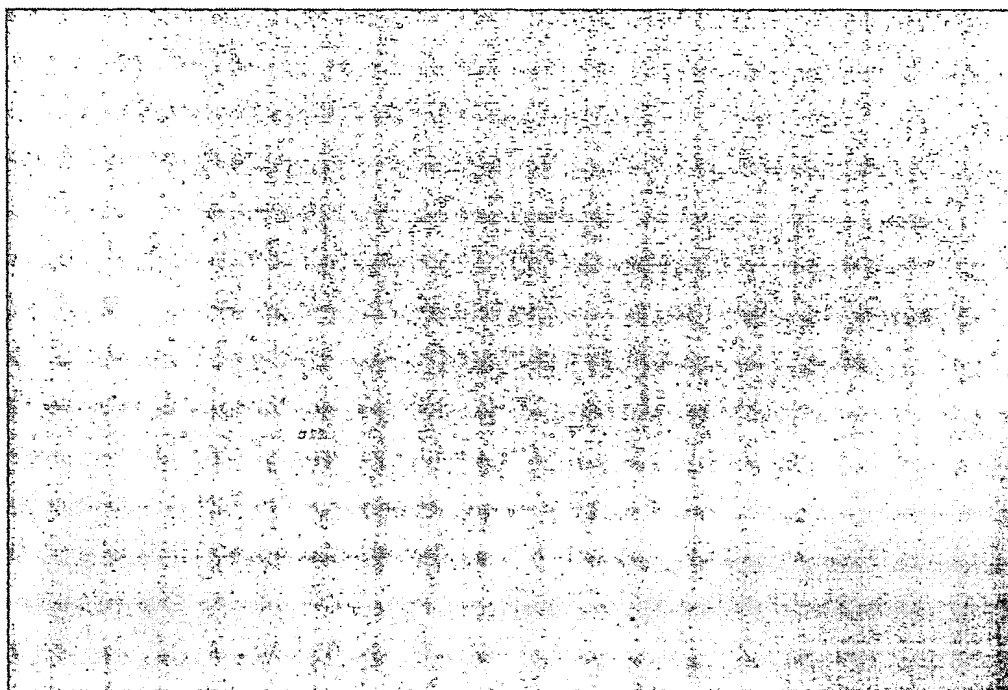


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FIG. 1

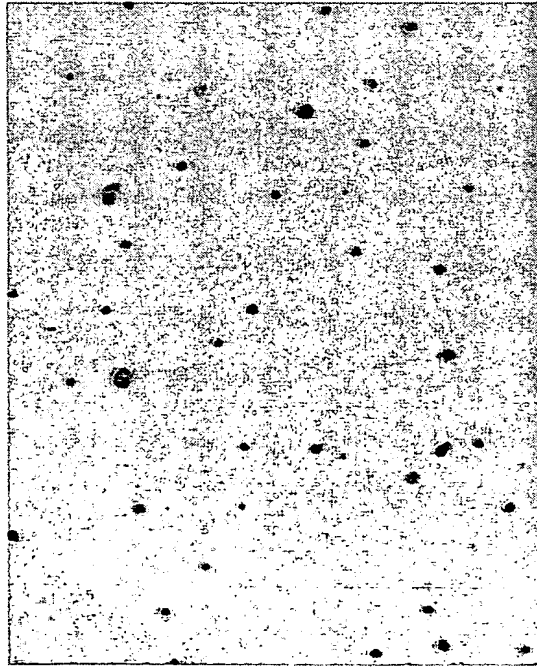


ON W THIN FILM

OPTICAL MICROSCOPIC PHOTOGRAPH  
OF SURFACE OF AlN THIN FILM (x800)

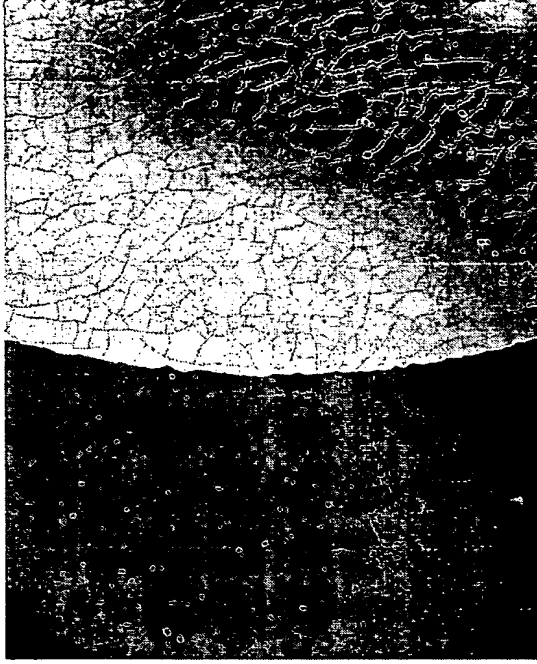
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FIG. 2 (a)



ON Ti/Au THIN FILM (x800)

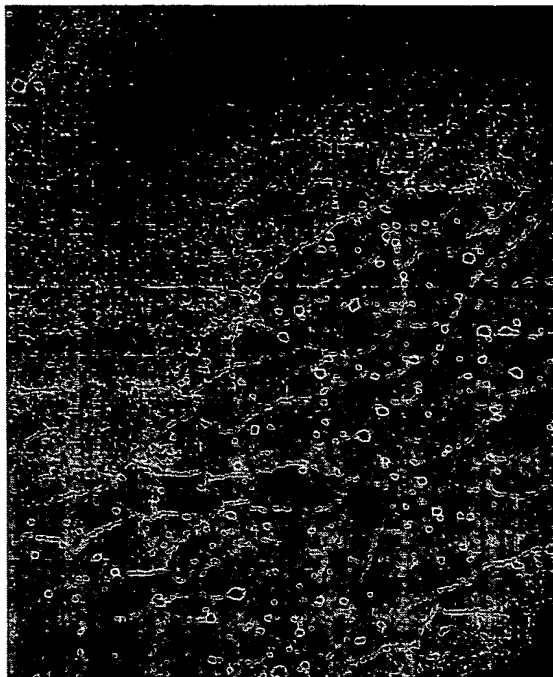
FIG. 2 (b)



ON Al-Si THIN FILM (x50)

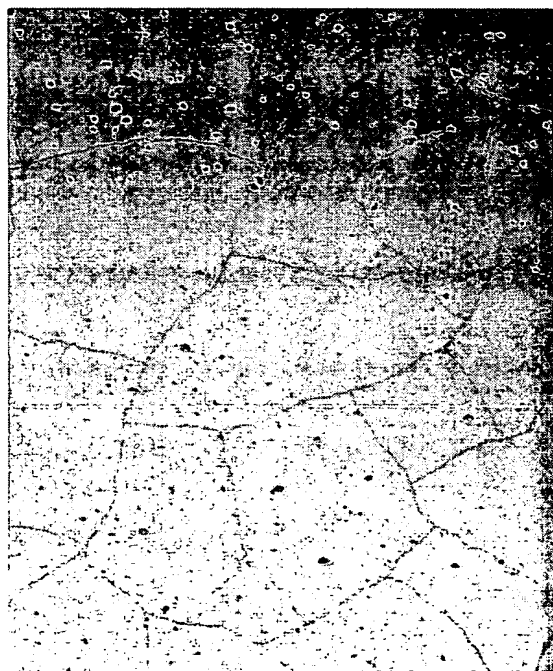
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FIG. 3(b)



ON Ni THIN FILM (x500)

FIG. 3(a)



ON Cr THIN FILM (x500)

OPTICAL MICROSCOPIC PHOTOGRAPH OF SURFACE OF AlN THIN FILM

FIG. 4

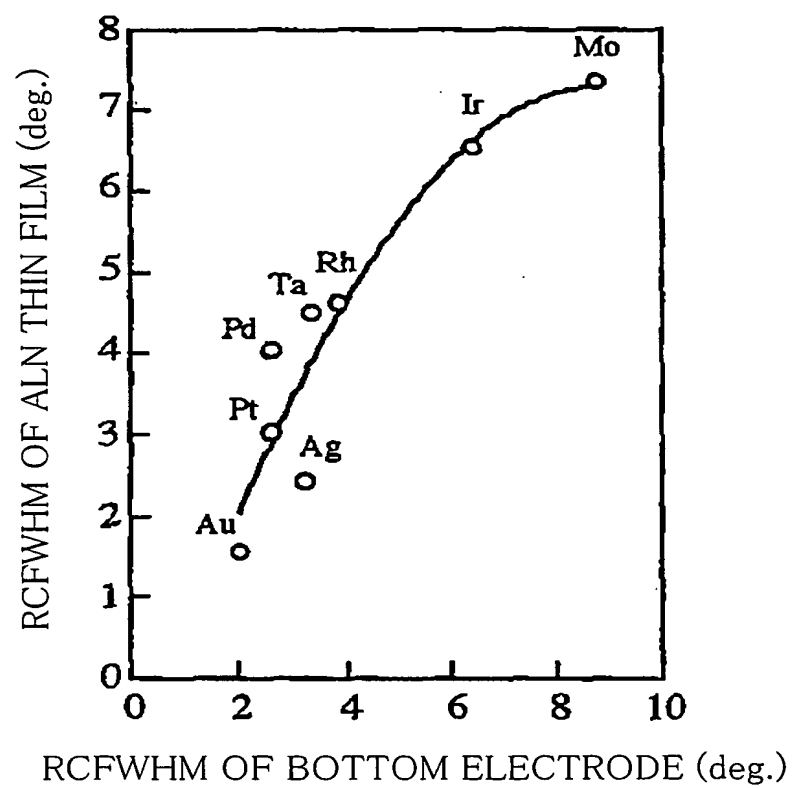


FIG. 5

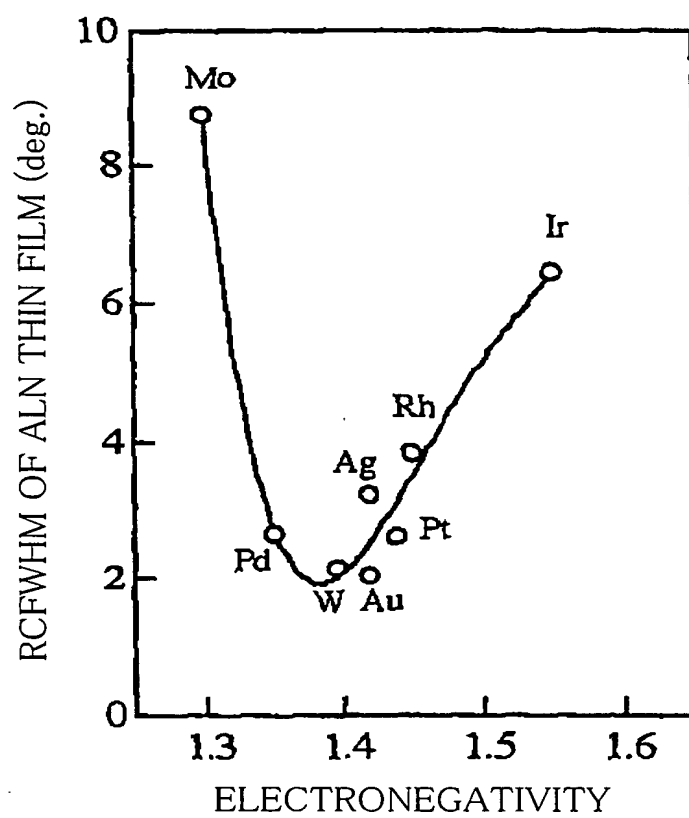


FIG. 6(a)

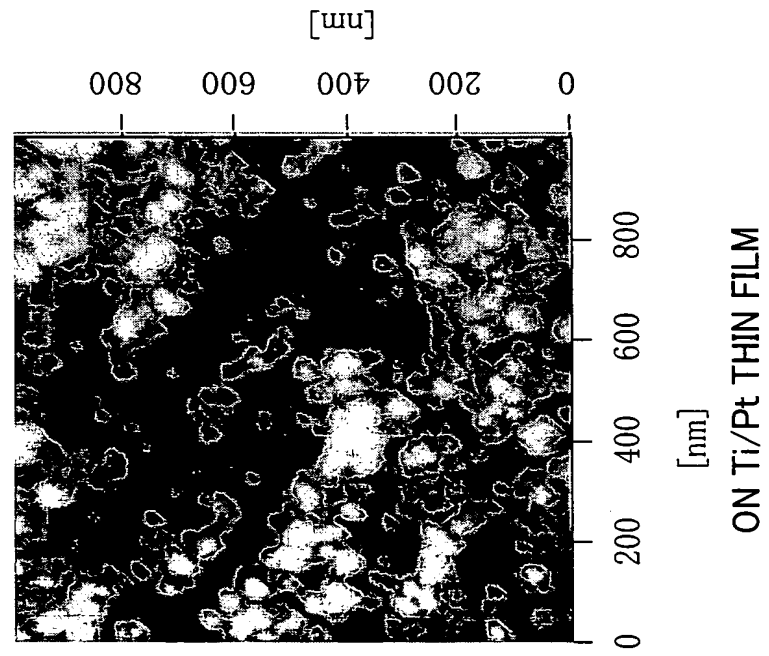
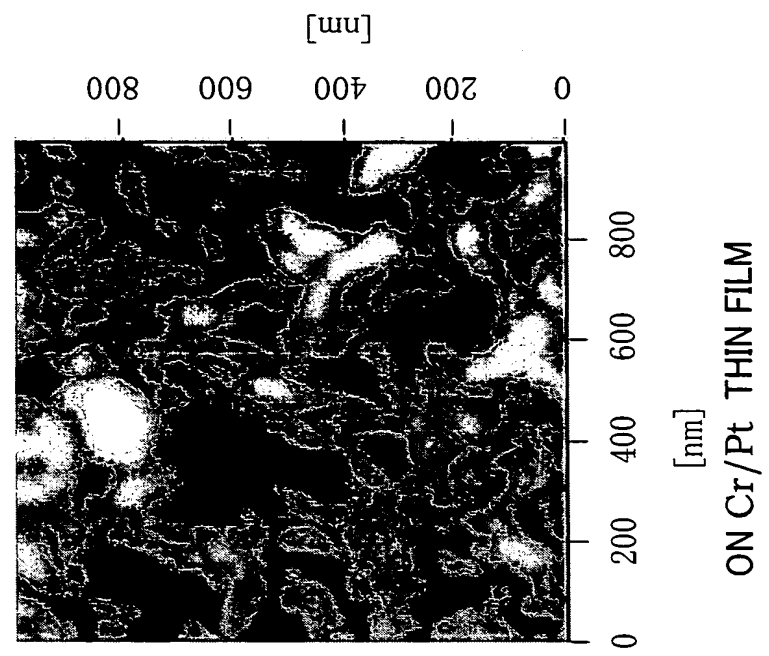
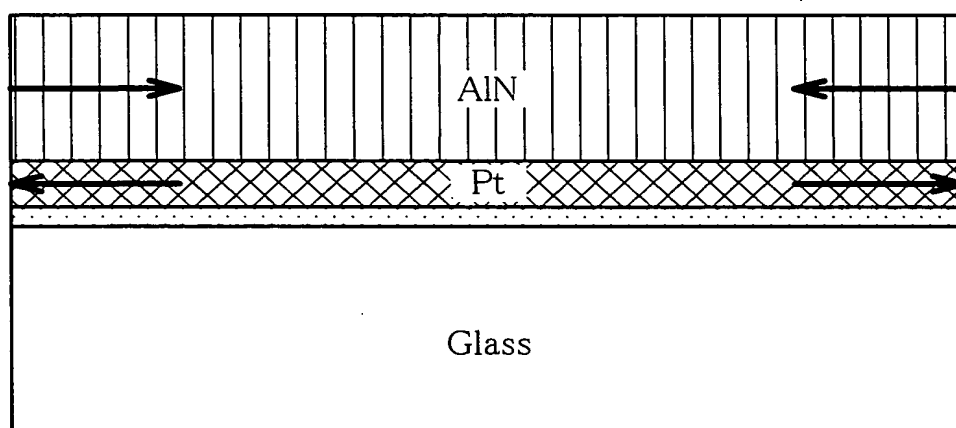


FIG. 6(b)



ATOMIC FORCE MICROSCOPE (AFM) IMAGE OF SURFACE OF AIN THIN FILM

FIG. 7



STRESS ACTING ON THIN FILM

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FIG. 8(b)

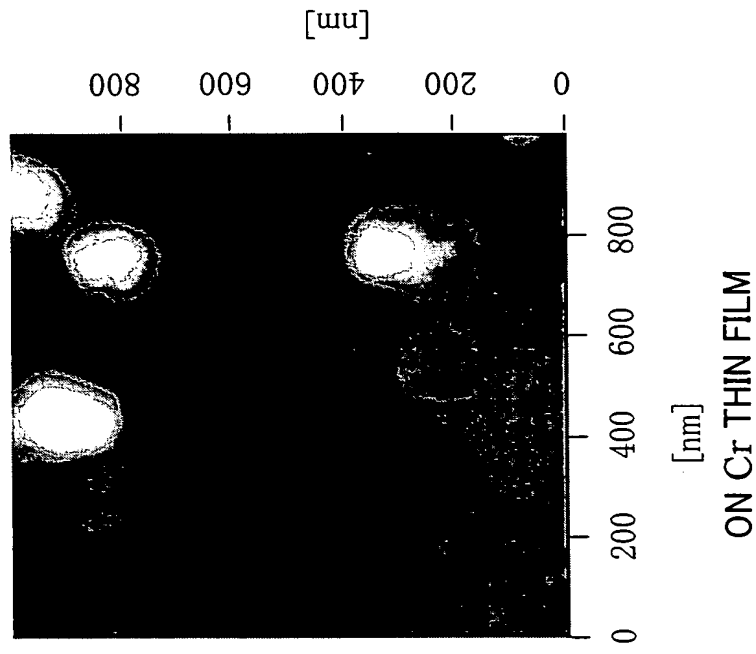
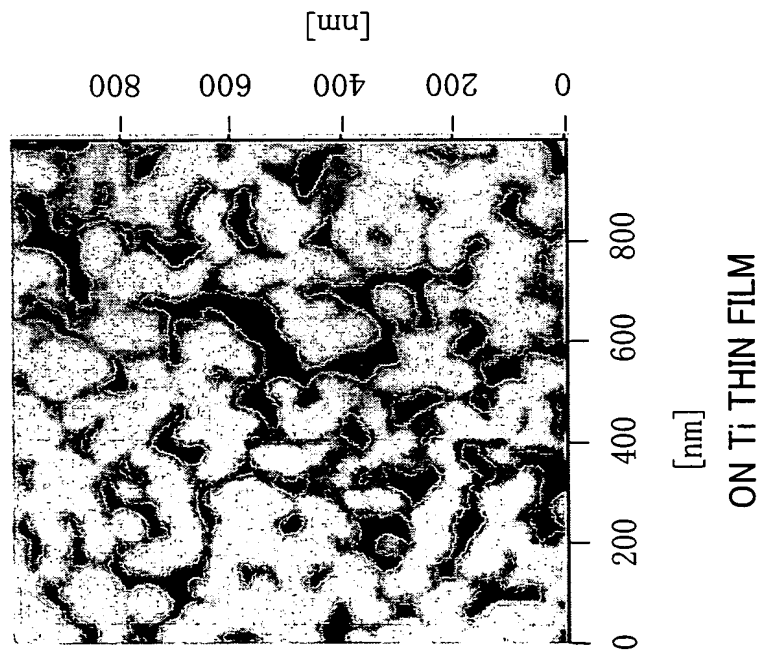


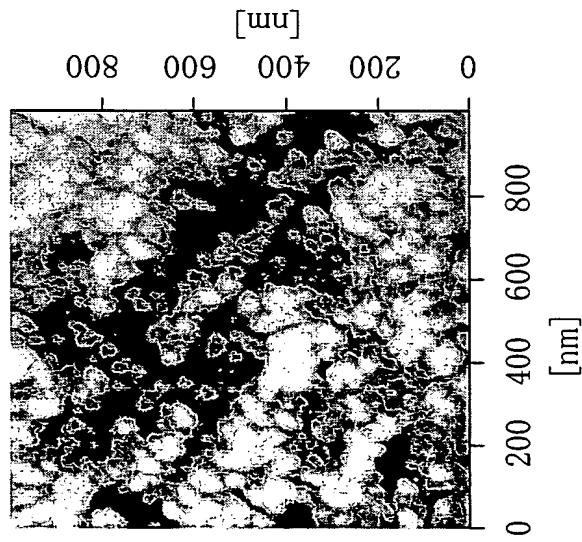
FIG. 8(a)



ATOMIC FORCE MICROSCOPE (AFM) IMAGE OF SURFACE OF Pt THIN FILM

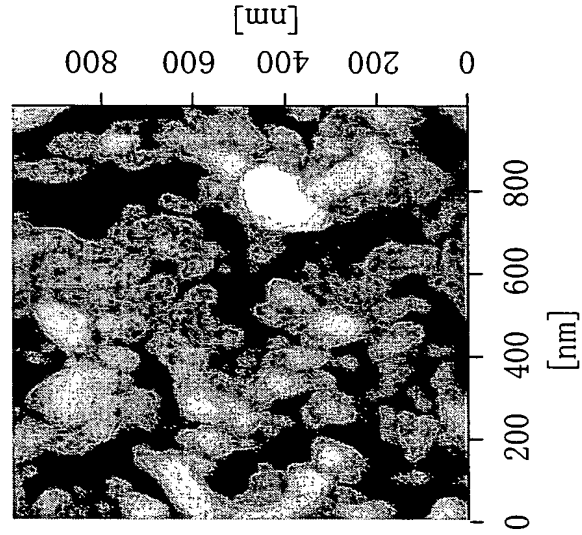


FIG. 9(a)



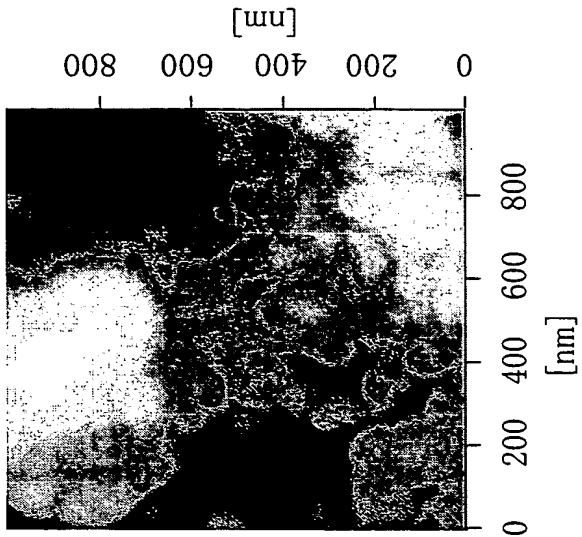
ROOM TEMPERATURE

FIG. 9(b)



300°C

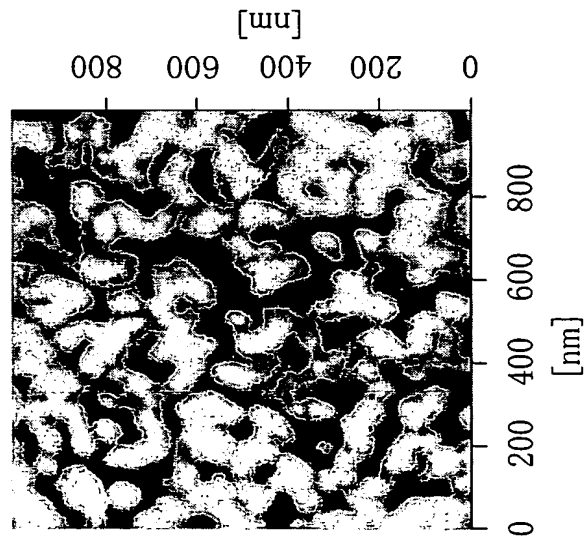
FIG. 9(c)



400°C

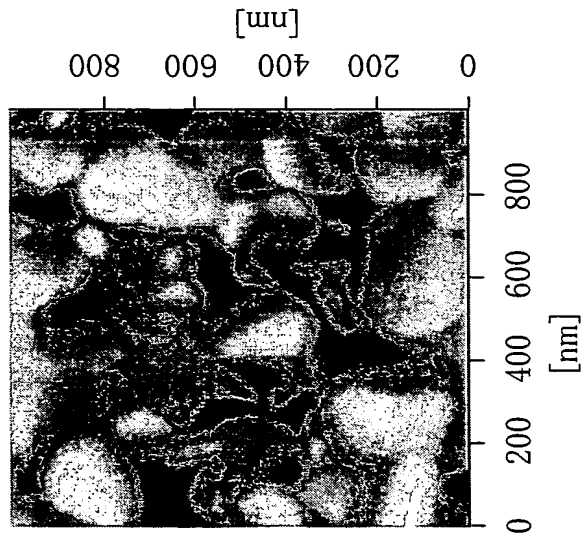
ATOMIC FORCE MICROSCOPE (AFM) IMAGES OF SURFACES OF AIN THIN FILMS  
ON Ti/Pt THIN FILMS PROCESSED AT DIFFERENT TEMPERATURES

FIG. 10(a)



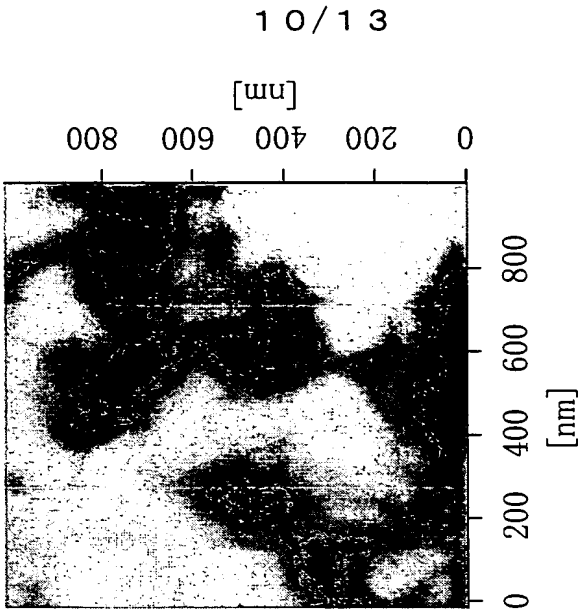
ROOM TEMPERATURE

FIG. 10(b)



300°C

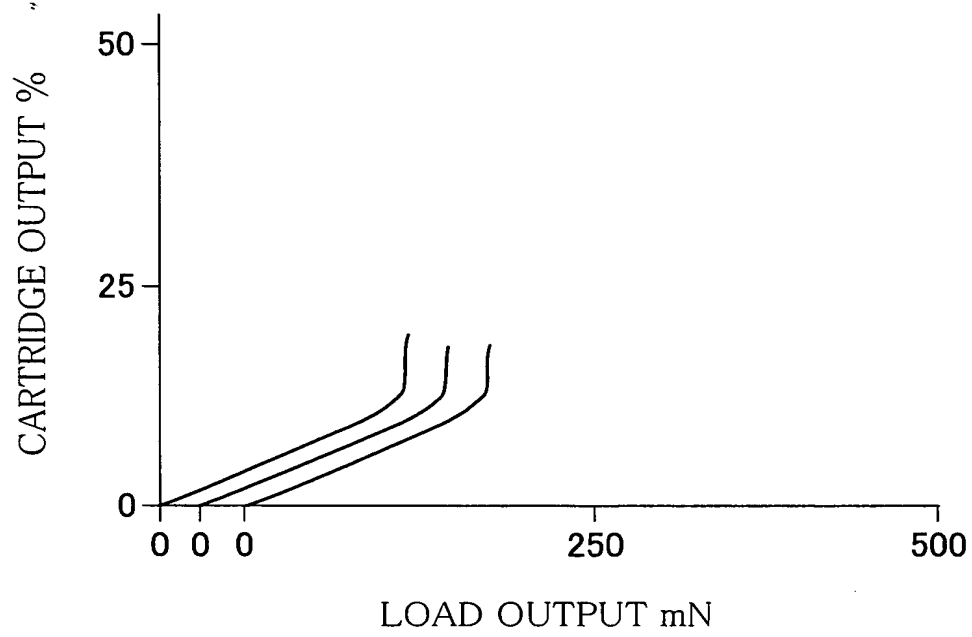
FIG. 10(c)



400°C

ATOMIC FORCE MICROSCOPE (AFM) IMAGES OF SURFACES OF Pt THIN FILMS  
ON Ti/Pt THIN FILMS PROCESSED AT DIFFERENT TEMPERATURES

FIG. 11



LOAD-OUTPUT GRAPH

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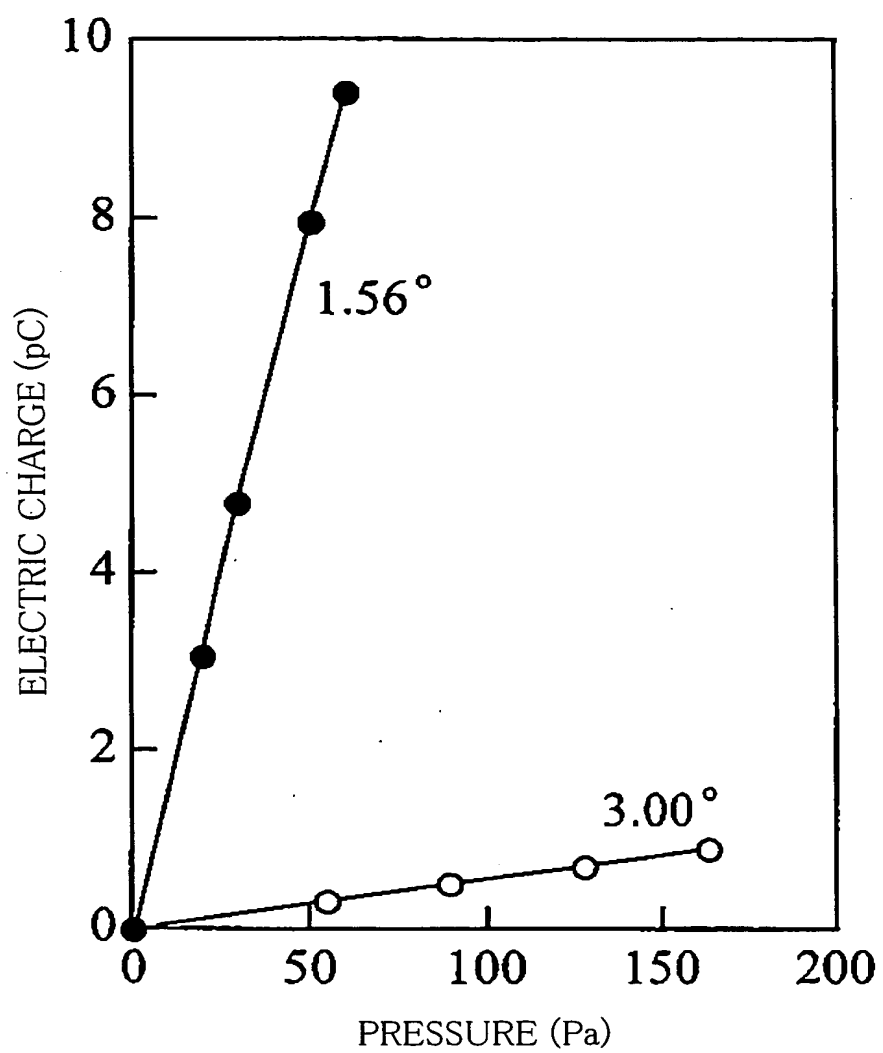
FIG. 12



DIRECTION OF MEASUREMENT →

MICROSCOPE PHOTOGRAPH OF SCRATCH (x150)

FIG. 13



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